PHYSICAL ACCESS SOLUTIONS

pivCLASS® Readers for FIPS 201

For the following security areas per NIST SP 800-116:

"Controlled" Areas | "Limited" Areas | "Exclusion" Areas

pivCLASS® READERS FOR "CONTROLLED" AREAS ENABLE HIGH SECURITY, INTEROPERABILITY AND COMPLIANCE

- **Part of an integrated solution from a single, trusted provider** – Enables FIPS 201 compliance and follows NIST SP 800-116 guidelines and the TWIC Reader Specification.
- **Contactless reader solution for "Controlled" security areas** – Meets NIST's "Controlled" security area assurance level requirements with a single-factor authentication mode: CHUID or CAK.
- **Supports multiple card types** – PIV, PIV-I, CAC, CIV (a.k.a., PIV-C), TWIC and FRAC, as well as iCLASS® and HID Prox cards for easy, phased transitions from legacy technology to new PKI-enabled smart cards.

ADDITIONAL PRODUCT FEATURES:

- Architected for maximum security and affordability. pivCLASS utilizes the pivCLASS® Authentication Module to perform the cryptographic functionality and to pass Wiegand-formatted data to the PACS controller. Locating the critical security operations within the secure perimeter, rather than on the attack side of the door, increases security and reader affordability.
- Up to two pivCLASS readers can connect to a pivCLASS Authentication Module via four-wire RS-485 per reader, typically enabling facilities to re-use much of their existing wiring.
- Available in mullion, mini-mullion and wall switch form factor designed to mount and cover single-gang switch boxes.
- Available with either a pigtail or terminal strip wiring termination.
- User communication provided by 8-Color LED and audio beeper.

HID Global pivCLASS® Government Solutions enable facilities to upgrade their existing physical access control system (PACS) to FIPS 201 compliance.

The pivCLASS contactless readers that deliver the "Controlled" assurance level (as defined in NIST SP 800-116) work with the pivCLASS Authentication Module to perform the following single-factor authentication modes:

CHUID Authentication – The pivCLASS system tests the signature on the PIV card holder unique identifier (CHUID) data object. The CHUID signature check ensures the card is authentic (it came from a valid issuer) and has integrity (it has not been altered).

Because the CHUID is a "free read" and will be transmitted unencrypted to any reader, it could be possible for perpetrators to capture a PIV card's CHUID and create a counterfeit card. However, the pivCLASS signature check secures against this threat and identifies cards that have been counterfeited or altered.*

CAK Authentication – pivCLASS readers work with the pivCLASS Authentication Module to perform a PKI challenge-response in addition to a signature check to validate the card authentication key (CAK). The challenge-response test ensures the public key in the Card Authentication Certificate is bound to the private key on the card. pivCLASS CAK authentication secures against cards that have been counterfeited, altered, copied or cloned.

pivCLASS readers are guaranteed to meet stringent specifications for operation, reliability and interoperability with other Genuine HID™ products.

* Per SP 800-116, to achieve "Controlled" assurance, the CHUID read must be combined with a visual check (VIS) of the identification card.

SPECIFICATIONS

Model Name	R10-H	R15-H	R40-H	RP10-H	RP15-H	RP40-H
Base Part Number	900NHR	910NHR	920NHR	900PHR	910PHR	920PHR
Typical Read Range[1]	**13.56 MHz for FIPS 201 Credentials**					
PIV, PIV-I, CIV (PIV-C), CAC, TWIC, FRAC[2]	0.5" (1.3 cm) - 1.25" (3.2 cm)					
	13.56 MHz Single Technology ID-1 Credentials (Cards) - SIO Data Model					
iCLASS SE	2.8" (7.1 cm)	2.6" (6.6 cm)	3.5" (8.9 cm)	2.6" (6.6 cm)	2.9" (7.4 cm)	3.3" (8.4 cm)
MIFARE DESFire EV1 SE	1.6" (4.1 cm)	1.6 (4.1 cm)	1.8" (4.6 cm)	1.2" (3.0 cm)	1.4" (3.6 cm)	1.4" (3.6 cm)
MIFARE Classic SE	2.6" (6.6 cm)	2.5" (6.4 cm)	2.8" (7.1 cm)	1.5" (3.8 cm)	2.5" (6.4 cm)	2.9" (7.4 cm)
	125 kHz Single Technology ID-1 Credentials (Cards) - Respective Prox Data Model					
HID Prox / AWID	N/A			2.5" (6.4 cm)	2.8" (7.1 cm)	1.4" (3.6 cm)
Indala Prox	N/A			1.5" (3.8 cm)	1.7" (4.3 cm)	0.8" (2.0 cm)
EM4102	N/A			1.5" (3.8 cm)	2.2" (5.6 cm)	0.8" (2.0 cm)
Mounting	Mini-Mullion Size; physically HID's smallest pivCLASS readers and ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Mullion Size; physically HID's second smallest pivCLASS readers and ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing	Mini-Mullion Size; physically HID's smallest pivCLASS readers and ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Mullion Size; physically HID's second smallest pivCLASS readers and ideally suited for mullion-mounted door installations, U.S. single-gang J-box (with mud ring) or any flat surface	Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing
Color	Black or Gray					
Keypad	No					
Dimensions	1.9" x 4.1" x 0.9" (4.8 x 10.3 x 2.3 cm)	1.9" x 6.0" x 0.9" (4.8 x 15.3 x 2.3 cm)	3.3" x 4.8" x 1.0" (8.4 x 12.2 x 2.4 cm)	1.9" x 4.1" x 0.9" (4.8 x 10.3 x 2.3 cm)	1.9" x 6.0" x 0.9" (4.8 x 15.3 x 2.3 cm)	3.3" x 4.8" x 1.0" (8.4 x 12.2 x 2.4 cm)
Product Weight (Pigtail)	3.9 oz. (113 g)	5.3 oz. (151 g)	7.7 oz. (220 g)	4.0 oz. (114 g)	5.2 oz. (149 g)	7.8 oz. (222 g)
Product Weight (Terminal Strip)	2.9 oz. (84 g)	4.2 oz. (120 g)	7.5 oz. (215 g)	3.0 oz. (85 g)	4.3 oz. (124 g)	7.6 oz. (216 g)
Operating Voltage Range	+12VDC					
Current Draw - Normal Standby Current[3]	45 mA	55 mA	75 mA	50 mA	55 mA	85 mA
Current Draw - Peak[3]	75 mA		110 mA	100 mA		120 mA
Operating Temperature	-31º to 150º F (-35º to 65º C)					
Storage Temperature	-67º to 185º F (-55º to 85º C)					
Operating Humidity	5% to 95% relative humidity non-condensing					
Environmental	Indoor / Outdoor; IP55					
Transmit Frequency	13.56 MHz			13.56 MHz & 125 kHz		
13.56 MHz Card Compatibility	PKI-based FIPS 201 credentials including PIV, PIV-I, CIV (PIV-C), CAC, TWIC and FRAC -- CAK & CHUID Secure Identity Object (SIO) on iCLASS SE, SE for MIFARE DESFire EV1, and SE for MIFARE Classic standard iCLASS Access Control Application ISO14443A (MIFARE) CSN					
125 kHz Card Compatibility	N/A			HID Prox, AWID, Indala, EM4102		
System Requirements	HID pivCLASS Authentication Module (M2000)					
Protocol	HID pivCLASS Protocol					
Cabling, Distance	Six conductor connection per reader: full duplex four-wire RS-485 for communication (500 ft. (150m), 22AWG); two-wires for power (500 ft. (150m), 22AWG)					
Wiring Connection	Pigtail or Terminal Strip					
Certifications	GSA Approved Products List , UL294 (US & Canada), FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea), NCC (Taiwan), iDA (Singapore), RoHS					
Cryto Processor Hardware Common Criteria Rating	EAL5+					
Housing Material	UL94 Polycarbonate					
Manufactured with % of recycled content (Pigtail)	10.5%	11.0%	10.5%	10.5%	11.0%	10.5%
Manufactured with % of recycled content (Terminal Strip)	11.0%	11.5%	11.0%	10.5%	11.0%	11.0%
UL Ref Number	R10D	R15D	R40D	RP10D	RP15D	RP40D
Warranty	Limited Lifetime					

[1] Typical read range achieved in air. Different types of metal will cause some degradation (typically up to 20%). Use spacers to space product off metal and improve read range if required.

[2] Credential dependent. Read ranges vary greatly depending on ISO standard and credential power requirements and design.

[3] Measured in accordance with UL294 standards.

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